

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for producing a peptide having three or more amino acid residues, comprising:

~~the step of forming the peptide having three or more amino acid residues with an enzyme or enzyme-containing substance,~~

wherein the enzyme or enzyme-containing substrate has an ability to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component.

2. (Currently Amended) The method for producing a peptide according to claim 1, wherein the enzyme or enzyme-containing substance comprises ~~one type or two or more types selected from the group consisting of a culture of a microbe, microbial cells separated from the culture, and a treated microbial cell product of the~~ an enzyme obtained from a microbe which have the ability to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component.

3. (Original) The method for producing a peptide according to claim 1, wherein the enzyme or enzyme-containing substance is able to use, as the carboxy component, both an amino acid ester and an amino acid amide.

4. (Canceled)

5. (Currently Amended) The method for producing a peptide according to claim 1,

wherein the enzyme is a protein (A) or (B):

(A) a protein having an amino acid sequence consisting of amino acid residues numbers 23 to 616 of an amino acid sequence described in SEQ ID NO: 6 ~~of the Sequence Listing~~,

(B) a protein having an amino acid sequence including substitution, deletion, insertion, addition, and/or inversion of one or a plurality of amino acids in the amino acid sequence consisting of amino acid residues 23 to 616 of the amino acid sequence described in SEQ ID NO: 6 ~~of the Sequence Listing~~, and having activity to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component.

6. (Currently Amended) The method for producing a peptide according to claim 1,

wherein the enzyme is a protein (C) or (D):

(C) a protein having an amino acid sequence consisting of amino acid residues numbers 21 to 619 of an amino acid sequence described in SEQ ID NO: 12 ~~of the Sequence Listing~~,

(D) a protein having an amino acid sequence including substitution, deletion, insertion, addition, and/or inversion of one or a plurality of amino acids in the amino acid sequence consisting of amino acid residues 21 to 619 of the amino acid sequence described in SEQ ID NO: 12 ~~of the Sequence Listing~~, and having activity to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than an amine component.

7. (Currently Amended) The method for producing a peptide according to claim 1, wherein the enzyme is a protein (E) or (F):

(E) a protein having an amino acid sequence described in SEQ ID NO: 6 ~~of the Sequence Listing~~,

(F) a protein containing a mature protein region, the protein having an amino acid sequence including substitution, deletion, insertion, addition, and/or inversion of one or a plurality of amino acids in the amino acid sequence described in SEQ ID NO: 6 ~~of the Sequence Listing~~, and having activity to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component.

8. (Currently Amended) The method for producing a peptide according to claim 1, wherein the enzyme is a protein (G) or (H):

(G) a protein having an amino acid sequence described in SEQ ID NO: 12 ~~of the Sequence Listing~~,

(H) a protein containing a mature protein region, the protein having an amino acid sequence including substitution, deletion, insertion, addition, and/or inversion of one or a plurality of amino acids in the amino acid sequence described in SEQ ID NO: 12 ~~of the Sequence Listing~~, and having activity to use as substrates an amine component having two or more amino acid residues and a carboxy component, to form a peptide having one more peptide bond than the amine component.

9. (Original) The method for producing a peptide according to claim 2, wherein the microbe is a microbe belonging to the genus *Empedobacter* or belonging to the genus *Sphingobacterium*.

10. (Currently Amended) The method for producing a peptide according to claim 2, wherein the microbe is a microbe that has been transformed so as to be able to express a protein encoded by a DNA (a) or (b):

- (a) a DNA having a base sequence consisting of bases numbers 127 to 1908 of a base sequence described in SEQ ID NO: 5 of the Sequence Listing,
- (b) a DNA that hybridizes with a DNA having a base sequence complementary to the base sequence consisting of bases numbers 127 to 1908 of the base sequence described in SEQ ID NO: 5 of the Sequence Listing under stringent conditions, and encodes a protein that has peptide-forming activity.

11. (Currently Amended) The method for producing a peptide according to claim 2, wherein the microbe is a microbe that has been transformed so as to be able to express a protein encoded by a DNA (c) or (d):

- (c) a DNA that consists of bases numbers 121 to 1917 of the base sequence described in SEQ ID NO: 11 of the Sequence Listing,
- (b) a DNA that hybridizes with a DNA consisting of a base sequence complementary to the base sequence consisting of bases numbers 121 to 1917 of the base sequence described in SEQ ID NO: 11 of the Sequence Listing under stringent conditions, and encodes a protein that has a peptide-forming activity.

12. (Currently Amended) The method for producing a peptide according to claim 2, wherein the microbe is a microbe that has been transformed so as to be able to express protein encoded by a DNA (e) or (f):

(e) a DNA having a base sequence consisting of bases numbers 61 to 1908 of a base sequence described in SEQ ID NO: 5 of the Sequence Listing,

(f) a DNA that hybridizes with a DNA having a base sequence complementary to the base sequence consisting of bases numbers 61 to 1908 of the base sequence described in SEQ ID NO: 5 of the Sequence Listing under stringent conditions, and encodes a protein that has a peptide-forming activity.

13. (Currently Amended) The method for producing a peptide according to claim 2, wherein the microbe is a microbe that has been transformed so as to be able to express a protein encoded by a DNA (g) or (h):

(g) a DNA that consists of bases numbers 61 to 1917 of the base sequence described in SEQ ID NO: 11 of the Sequence Listing,

(h) a DNA that hybridizes with a DNA consisting of a base sequence complementary to the base sequence consisting of bases numbers 61 to 1917 of the base sequence described in SEQ ID NO: 11 of the Sequence Listing under stringent conditions, and encodes a protein that contains a mature protein region having a peptide-forming activity.

14. (Original) The method for producing a peptide according to claim 1, wherein the carboxy component comprises one type or two or more types selected from the group consisting of an L-alanine ester, a glycine ester, an L-threonine ester, an L-tyrosine ester and a D-alanine ester.